



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,614	06/12/2006	Koichiro Tanaka	0756-7727	2015
31780	7590	04/15/2009	EXAMINER	
ERIC ROBINSON			MUSTAPHA, ABDULFATTAH B	
PMB 955			ART UNIT	
21010 SOUTHBANK ST.			PAPER NUMBER	
POTOMAC FALLS, VA 20165			2812	
			MAIL DATE	DELIVERY MODE
			04/15/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/582,614

**Applicant(s)**

TANAKA ET AL.

**Examiner**

ABDULFATTAH MUSTAPHA

**Art Unit**

2812

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 and 29-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 02/05/2007 and 06/12/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election without traverse of Group V (Claims 19 – 28) in the reply filed on 03/23/2009 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19 and 24 rejected under 35 U.S.C. 102(b) as being anticipated by Ishida et al. [US 2002/0137342].

Ishida et al. disclose emitting a first laser beam from a first laser oscillator; emitting a second laser beam from a second laser oscillator; combining the first laser beam with the second laser beam by a dichroic mirror 4 [Figure 4]; crystallizing a semiconductor film by irradiating the semiconductor film with the combined laser beam [0092], wherein the first laser beam passes through the first dichroic mirror 4 and the second laser beam is reflected on the first dichroic mirror 4, and wherein wavelength of

the first laser beam is different from that of the second laser beam {0023 – 0028, 0069 – 0075, Figure 4} (Claim 19). Ishida et al. disclose emitting a first laser beam from a first laser oscillator; emitting a second laser beam from a second laser oscillator; emitting a third laser beam from a third laser oscillator [Figure 4]; combining the first laser beam with the second laser beam by a first dichroic mirror, thereby forming a first combined laser beam; combining a first combined laser beam a third laser beam by a second dichroic mirror, thereby forming a second combined laser beam; and crystallizing a semiconductor film by irradiating the semiconductor film with the second combined laser, wherein the first laser beam passes through the first dichroic mirror and the second laser beam is reflected on the first dichroic mirror [0092], wherein the first combined laser beam passes through the second dichroic mirror and the third laser beam is reflected on the second dichroic mirror, and wherein wavelengths of the first, second, third laser beams are different from each other {0023 – 0028, 0069 – 0075, Figure 4} (Claim 24).

Claims 19 – 22 and 24 – 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Takaura [JP 2003 228034 A].

Takaura disclose emitting a first laser beam from a first laser oscillator 1-1; emitting a second laser beam from a second laser oscillator 1-2; combining the first laser beam with the second laser beam by a dichroic mirror (10, 11); crystallizing a

semiconductor film by irradiating the semiconductor film with the combined laser beam, wherein the first laser beam passes through the first dichroic mirror and the second laser beam is reflected on the first dichroic mirror 10, and wherein wavelength of the first laser beam is different from that of the second laser beam {Figures 6 – 9} (Claim 19). Takaura disclose the combined laser beam passes through a condensing lens 9, 32, 33 before being projected to the irradiation surface in order to have a desired shape {Figures 4, 6 – 9} (Claims 20 and 25). Takaura disclose the condensing lens is an achromatic lens 92, 33 or an apochromatic lens {Figures 7 – 9} (Claims 21 and 26). Takaura disclose wherein the achromatic lens or the apochromatic lens comprises a plurality of lenses and has a different focal length for each of the first and second laser beams {Figures 7 – 9} (Claims 22 and 27). Takaura disclose emitting a first laser beam from a first laser oscillator; emitting a second laser beam from a second laser oscillator; emitting a third laser beam from a third laser oscillator; combining the first laser beam with the second laser beam by a first dichroic mirror, thereby forming a first combined laser beam; combining a first combined laser beam a third laser beam by a second dichroic mirror, thereby forming a second combined laser beam; and crystallizing a semiconductor film by irradiating the semiconductor film with the second combined laser, wherein the first laser beam passes through the first dichroic mirror and the second laser beam is reflected on the first dichroic mirror, wherein the first combined laser beam passes through the second dichroic mirror and the third laser beam is reflected on the second dichroic mirror, and wherein wavelengths of the first, second, third laser beams are different from each other {Figures 6 – 9} (Claim 24).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takaura [JP 2003 228034 A] as applied to claims 19 and 24 above respectively, and further in view of Yamazaki et al. [US 2003/0025118].

Tanaka fail to disclose the semiconductor device is incorporated into an electronic appliance selected from the group consisting of a video camera, a digital camera, a goggle-type display, a navigation system, a car audio, an audio compo, a computer, a game machine, a mobile computer, a mobile phone, a mobile game machine, an electronic book, and an image reproduction device (Claims 23 and 28).

Yamazaki et al. disclose the semiconductor device is incorporated into an electronic appliance selected from the group consisting of a video camera, a digital camera, a goggle-type display, a navigation system, a car audio, an audio compo, a computer, a game machine, a mobile computer, a mobile phone, a mobile game

machine, an electronic book, and an image reproduction device {0197, Figures 13 and 14} (Claims 23 and 28).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the invention of Takaura by adding the semiconductor device is incorporated into an electronic appliance selected from the group consisting of a video camera, a digital camera, a goggle-type display, a navigation system, a car audio, an audio compo, a computer, a game machine, a mobile computer, a mobile phone, a mobile game machine, an electronic book, and an image reproduction device as taught by Yamazaki et al. in order to effective utilization of display devices.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDULFATTAH MUSTAPHA whose telephone number is (571)272-9736. The examiner can normally be reached on Mon-Thus. (10:00am - 8:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 571-272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abdulfattah Mustapha

/Charles D. Garber/  
Supervisory Patent Examiner, Art Unit 2812